Petro Marine Services

Kensington Fuel Depot

Project Description

and

Summary of Specification Sheets

Project Description

Petro Marine Services proposes to replace the current iso-container fuel system at the Kensington Mine with a state of the industry, transportable fuel depot, increasing safety and environmental protection while improving fuel quality control, reliability of supply and control.

The fuel depot will consist of seven UL 142 listed 50,000 gallon self-contained storage tanks with integral secondary containment. Each tank will be equipped with an overfill prevention valve, high level alarm with audible and visible alerts, interstitial monitoring, temperature mechanical level gauges. The tanks and piping will be protected against impact by concrete jersey barriers or similar structures.

From the shoreline at the barge dock, there will be a 3in camloc coupling fitted on to the 3in header pipe and 2bbl drip pan to catch any product released during coupling and uncoupling the hose. There will be approximately 500ft of 3in piping from the shoreline to the tank farm. The first approximately 200ft of this pipe will be underground A106 seamless schedule 80 steel pipe protected by cad-welded anodefex against corrosion. The remainder of the pipe will be aboveground A106 seamless schedule 40 steel pipe, connecting to the tanks either singly or in series depending upon the needs of the operator. Each tank will have a 3in Nordstrom control valve prior to the overfill prevention valve. All pipe-tank connections will have flexible couplings to prevent separation during seismic and other unexpected movements.

There will be 3 check valves in-line to minimize product release should a piping failure occur for any reason. These check valves will be field located for best effect.

From the tank(s) to the loading facility, each tank will have a 3in Nordstrom control valve that must be opened to provide fuel to the loading station. All pipe-tank connections will have flexible couplings to prevent separation during seismic and other unexpected movements.

The loading station will be a portable 20ft shipping container connected to the supply piping by a 3ft flanged flex coupling. The container will have a (name) generator powered by a 8-14.2kw power unit connected to a 3in pump, fuel filter and meter which will connect via high grade aircraft spec hose to the fuel truck. A Scully overfill prevention system will be part of the loading station as well, connected to the tank truck's Scully overfill prevention system. In the rare event of a system malfunction, there are processes to

override the various systems in an emergency to load fuel into a tank truck and continue supply to the mine critical processes.

The tank truck is a uniquely outfitted Kenworth T800 chassis specifically designed for this application. It will be fitted with a 6,300gal Beall tank, specially modified to meet the demands of this environment and road conditions.

General References and Requirements

- Welding procedures & standards are per ASME Section IX, Part QW Articles I-V
- Federal Response Plan conforms to 33 CFR 154 and 40 CFR 112
- Spill Prevention Control and Countermeasures Plan conforms to 40 CFR 112 and NFPA 30 requirements
- U. S. Coast Guard Operations Manual conforms to 33 CFR 154 requirements
- Pipe material is A 106 Seamless Domestic schedule 40/80 steel
- Tank inspections will conform to STI SP001 inspection requirements

Cut Sheet Summary

All products submitted are "typical" of items intended to be used in the project. Alternative vendors and/or products of equal or greater quality/specification may be substituted as appropriate.

Group 1 – Pipes, valves

- A106 Seamless Pipe
- FNW Stainless Steel Ball Valve
- 246DRF Swing Check Valve
- Flanged Pressure ByPass Valve
- Male Pressure ByPass Valve

Group 2 – Tanks, Vents, Gauges

- 50,000 Gallon Double Walled Skid Mounted Tank
- 9095A Overfill Prevention Valve
- 419 Drop Tube
- 2440F Emergency Vent
- Series 670 Flame Arrester
- OPW 200TG Mechanical Tank Gauge
- OPW 444TA Four Signal Tank Alarm

Group 3 – Loading Facility

- Genset Power Unit
- Petroleum 300 Pump
- Petroleum 300 Motor
- Velcon VF Series Filter Vessel
- Liquid Controls M25 Meter
- Civacon 8580 Overfill Protection & Diagnostic Monitor
- Civacon Portable Cane Probe
- Civacon Plug and Cord Set

Group 4 – Tank Truck

- Kenworth T800 Chassis
- Beall 6300 Gallon Aluminum Tank
- ScuL-Sense Two Wire Optic Sensor for Overfill Protection
- Scully Sockets

Group 5 – Drawings

- Site Plan
- Cathodic Protection for Underground Piping
- Trench Cross Section
- Loading Station Shipping Container

Document Summary

- Project Narrative
- Letter of Intent to Operate
- Letter Requesting Waiver of 33CFR105 Requirements
- U. S. Coast Guard Operations Manual
- Fuel Depot Handbook
- Fuel Depot Facility Response Plan – Draft
- Spill Prevention, Control & Countermeasures Plan - Draft
- U. S. DOT Security Plan